Outfall 002A – TCE Exceedance in January 2018 and Plan of Action

The TCE concentration in the sample from outfall 002A (groundwater infiltration) was 9.4 ppb this month, compared to a permit limit of 5 ppb.

We believe this exceedance was due to the following:

- Full capture of dry weather flow was not being achieved at the time of sample collection at a recovery flow rate of 36 gallons per minute (gpm).
    - The maximum achievable dry-weather flow recovery rate was below 40 gpm at the time of sampling due to poor influent water quality from the storm sewer (i.e. high total suspended solids due to road-salt/sand from snowmelt and organics) negatively impacting GWTP operations (i.e. increased fouling of air stripper, bag filters and carbon).

The reasons for this conclusion are as follows:

1. Flow was observed going over the baffle and the overflow switch, installed at the top of the baffle, was engaged.
2. The estimated flow going over the baffle at the time of sample collection was approximately 6 gpm. This flow was determined by taking the difference of the measured flow at 002A (90.6 gpm) at the time of sample collection (1/26/18 at 2:52 PM) and subtracting the observed effluent (002B) flow (84.7 gpm) at that time.
3. Combining the flow going over the baffle, 6 gpm, with the confirmed dry weather recovery flow rate of 36 gpm yields a total dry weather flow at the time of sample collection of approximately 42 gpm.

The following corrective action(s) is (are) being evaluated for possible implementation this year:

1. Modify GWTP treatment train to include pre-filtration of dry-weather flow from storm sewer before transfer to influent equalization tank for treatment, with other influent sources, and discharge of clean effluent. All auxiliary equipment will be designed to handle at least 50 gpm and the control logic will allow for dry-weather flow catchment system to operate independently of the rest of the GWTP treatment train.
    a. This is expected to increase the amount of dry-weather flow that can be captured and treated under poor water quality conditions (as described above).